Role of Naloxone in Opioid Overdose Fatality Prevention

Post Meeting Summary

Naloxone is an opioid receptor antagonist that is approved for use by injection only for the reversal of opioid overdose and for adjunct use in the treatment of septic shock. It is currently being used mainly in emergency departments and in ambulances by trained medical professionals. There have been efforts to expand its use by providing the drug to some patients with take-home opioid prescriptions and those who inject illicit drugs, potentially facilitating earlier administration of the drug. On April 12, 2012, FDA, CDC, NIDA and the HHS Office of the Assistant Secretary for Health sponsored a public meeting to initiate a discussion about whether naloxone should be made more widely available outside of conventional medical settings. A link to the meeting page that contains additional information is located here: http://www.fda.gov/Drugs/NewsEvents/ucm277119.htm.

Meeting Highlights

- The White House Office of National Drug Control Policy (ONDCP) Prescription Drug Abuse Prevention Plan includes a discussion of naloxone. A statement on behalf of ONDCP Director, Gil Kerlikowske, was read at the meeting. It noted that the Obama Administration recognizes "the important role naloxone can play in overcoming drug overdoses," as articulated its 2010 National Drug Control Strategic Plan.

- In the United States, mortality rates closely correlate with opioid sales. In 2008, approximately 36,450 people died from drug overdoses. At least 14,800 of these deaths involved prescription opioid analgesics. Moreover, according to the Substance Abuse and Mental Health Services Administration, the number/rate of Americans 12 years of age and older who currently abuse pain relievers has increased by 20 percent between 2002 and 2009.

- The UN Commission on Narcotics Drugs "encourages all Member States to include effective elements for the prevention and treatment of drug overdose, in particular opioid overdose, in national drug policies, where appropriate, and to share best practices and information on the prevention and treatment of drug overdose, in particular opioid overdose, including the use of opioid receptor antagonists such as naloxone."

- Most speakers agreed that there should be easier access to naloxone. One speaker said that better data are needed on whether naloxone is effective in saving lives. One issue to be addressed is the relatively short half-life of naloxone compared to some longer-acting opioid formulations. After naloxone is administered, it is important to seek immediate medical attention.

- Speakers commented on the concern that increasing the overall availability of naloxone might lead to increased drug use by giving a false sense of security, and suggested this was not a likely concern. An overview of research related to attitudes and behaviors related to STDs, and in particular to HPV vaccination (Gardasil), presented at the meeting reported no association with an increase in unprotected sex among sexually active women. Similarly, no evidence for greater risk-taking has been seen in the area of protective equipment to prevent childhood injuries (such as bike helmets). One speaker said that such interventions do not necessarily lead to more risky behaviors. Instead, the results are dependent on the prevention strategy, the target of the strategy, individual characteristics and the larger social context.

- Most speakers participating in the open public hearing, some of whom had lost family members or friends to opioid overdose, recommended that the use of naloxone be switched to over-the-counter (OTC) status and encouraged FDA to quickly take steps to improve access to the drug, including by approving non-injectable forms (e.g., intranasal) of the drug.

- FDA discussed the general pathways to expand access to naloxone through the development of new formulations or making naloxone approved for use over the counter (OTC).

    - Gaining FDA approval for a new naloxone formulation, such as an intranasal or auto-injector form, would require a bioequivalence study. In such a trial, drug levels with the new and injectable forms of naloxone would be compared. Such studies typically require fewer than 100 subjects. Data related to safety, chemistry and manufacturing as well as data related to the device used to administer the drug are necessary.

    - Switching naloxone to over the counter would likely require additional clinical data that answers the following questions:

        - Can patients (or their caregivers) understand the directions?
        - Can patients (or their caregivers) follow the directions?
        - Can patients (or their caregivers) properly decide if they should use the product?

    In addition, data would need to be collected on the new naloxone product to see if OTC consumers are able to use it safely.

Speakers agreed that there is a need for better coordination among Federal agencies, manufacturers and other stakeholder groups to resolve regulatory issues and improve access to the drug. The meeting ended with each of the Federal partners expressing a willingness to work with interested manufacturers and developers to further explore the best uses of naloxone to prevent opioid overdose deaths.